

Application No.: 10/050,775
Amendment dated May 4, 2004
Reply to Office Action of February 5, 2004

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1-2 (canceled)

Claim 3 (previously presented) A process for producing an untapered pinhole disk laminate for use as an order sorting aperture in hard-x-ray microscopy using a Fresnel zone plate which comprises the steps of superposing a plurality of pinhole disks, passing a wire, a fiber, or a pin through the pinholes and viewing the pinholes containing the wire, fiber, or pin with a microscope and adjusting the relative positions of the respective pinholes of the disks to bring the pinholes into alignment, and bonding or welding the superposed pinhole disks together with the positions of their pinholes kept in alignment.

Claim 4 (canceled)

Claim 5 (previously presented) A process for producing an untapered pinhole disk laminate for use as an order sorting aperture in hard x-ray microscopy with a Fresnel zone plate which comprises the steps of superposing a plurality of pinhole disks, passing light through the pinholes and measuring the intensity of light passing through the pinholes with a photodetector, adjusting the relative positions of the pinholes in the disks to provide a maximum light intensity and to align the pinholes, and bonding or welding the superposed pinhole disks together with the positions of their pinholes kept in alignment.

Claim 6 (previously presented) The method of claim 3 wherein the pinhole disks are made of metal.

Claim 7 (previously presented) The method of claim 6 wherein the metal is platinum.

Claim 8 (previously presented) The method of claim 5 wherein the pinhole disks are made of metal.

Claim 9 (previously presented) The method of claim 8 wherein the metal is platinum.

Claim 10 (currently amended) An untapered pinhole disk The laminate of claim 1
wherein the disks are made of for use as an order sorting aperture in hard x-ray microscopy
using a Fresnel zone plate comprising a multiple of superposed metal pinhole disks which are
bonded or welded together with the positions of the respective center pinholes kept in alignment,
thereby forming an untapered hole through the center of the pinhole disk laminate.

Claim 11 (previously presented) The laminate of claim 10 wherein the metal is platinum.

Claim 12 (currently amended) The laminate of claim 10, the thickness of
which is adjustable by changing the number of the superposed metal pinhole diskswherein the
disks are made of metal.

Claim 13 (previously presented) The laminate of claim 12 wherein the metal is platinum.